

data of a microarray wherein crosstalk is caused by overlapping dye emission spectra, the method comprising:

- providing a microarray substrate having calibration dye spots, each of the calibration dye spots comprising a single pure dye;

- for each of the calibration dye spots, sequentially generating a dye image containing at least one of the calibration dye spots for each of a plurality of output channels;

- for each of the calibration dye spots, measuring an output of each of the output channels to obtain output measurements;

- computing a set of correction factors from the output measurements; and

- applying the set of correction factors to data obtained from the sequentially generated microarray images containing spots having dyes with excitation or emission spectra to obtain crosstalk-corrected data.

10. (Twice Amended) A system for automatically creating crosstalk-corrected data of a microarray wherein crosstalk is caused by overlapping dye emission spectra, the system comprising:

- a microarray substrate having calibration dye spots, each of the calibration dye spots comprising a single pure dye;

- an imager having a plurality of output channels wherein for each of the calibration dye spots the imager sequentially generates a dye image containing at least one of the calibration dye spots for each of the output channels;

- means for measuring an output of each of the output channels for each of the calibration dye spots to obtain output measurements;

- means for computing a set of correction factors from the output measurements;
- and

- means for applying the set of correction factors to data obtained from the sequentially generated microarray images containing spots having dyes with excitation or emission spectra to obtain crosstalk-corrected data.